# EXERCISE BOOK
# DETECTION AND CONTROL OF
# EPIDEMIC MENINGOCOCCAL DISEASE

## CONTENTS

# WORKSHOP EXERCISES

## EXERCISE 1

## CASE DEFINITIONS OF MENINGOCOCCAL DISEASE

1. a. What is the surveillance case definition for *suspected* bacterial meningitis?

   b. What is the case-definition for a *probable* case?

2. Read about these patients and decide whether or not they meet the case definition for *suspected* bacterial meningitis.

On the morning of Tuesday, February 12, a District Health Officer received a report of five suspected meningitis cases from a single health facility in his district. He called the health facility to verify this report. He was told that all the patients came to the health facility on Monday, February 11.

c. The first patient was a 13-year-old boy who had fever and was complaining of a headache. He had a stiff neck.

*Yes* _____ *No* _____

d. The second patient was the 5-year-old sister of the first patient, she had a high fever.

*Yes* _____ *No* _____

e. The third patient was 6 months of age and had a fever and a bulging fontanelle.

*Yes* _____ *No* _____

f. The fourth patient was a 12-year-old boy who had fever and could barely stay awake during the examination. He also had dark spots on his forearm that his mother said were new.

*Yes* _____ *No* _____

g. The fifth patient, 50-years-old, had a fever and a headache.

*Yes* _____ *No* _____

# EXERCISE 2

## CALCULATION OF ATTACK RATES AND CASE FATALITY RATES

By Friday, February 15, the District Health Officer had received reports of a total of 14 suspected meningococcal disease cases from three different health facilities in the same sub-district (population - 35,000). He has confirmed that 12 of these cases meet the suspected case definition. Two of the cases had lumbar punctures which revealed purulent CSF. He checks his reports from the week before and finds that only three cases had been reported from health facilities in the same sub-district.

1. Calculate the weekly attack rates per 100,000 persons for the last two weeks in this sub-district.

2. What should the District Health Officer do?

By Friday, February 22, an additional 10 suspect meningococcal disease cases have been reported from the same sub-district (population - 35,000). All of them have been confirmed as meeting the suspected case definition. Two of the three CSF specimens collected during the epidemiologic investigation last week have grown *Neisseria meningitidis* serogroup A.

3. What is the attack rate for the 3rd week?

4. Should there be a mass vaccination campaign? Briefly give a reason for your answer.

In a neighboring district there have been 350 cases of meningococcal disease and 100 deaths.

5. What is the case fatality rate?

6. Is the case fatality rate: *(Circle your choice)*

   a. high?

   b. about what is expected during an epidemic?

   c. low?

   What action should be taken?

# EXERCISE 3

## PLAN VACCINATION STRATEGY

## (CALCULATE AGE-SPECIFIC ATTACK RATES)

The Epidemic Committee in Savah District is planning the strategy for the meningococcal disease mass vaccination campaign. Because resources are limited, they need to vaccinate the people who are most at risk.

1. Define "attack rate".

2. How should the committee decide which groups of people are most at risk?

3. Calculate the age-specific attack rate for each age group using these data collected by the investigation team. The population of Savah district is 100,000 people. (Your facilitator may ask you to use the population of your own district instead). Record your answers in this table shell.

| Age Groups (years) | % of Total Population | District Population | Number of Cases | Attack Rate |
|---|---|---|---|---|
| 0-4 | 17 | | 22 | |
| 5-14 | 28 | | 20 | |
| 15-29 | 28 | | 10 | |
| 30-44 | 15 | | 0 | |
| 45 and older | 12 | | 0 | |

4. Which group has the highest attack rate?

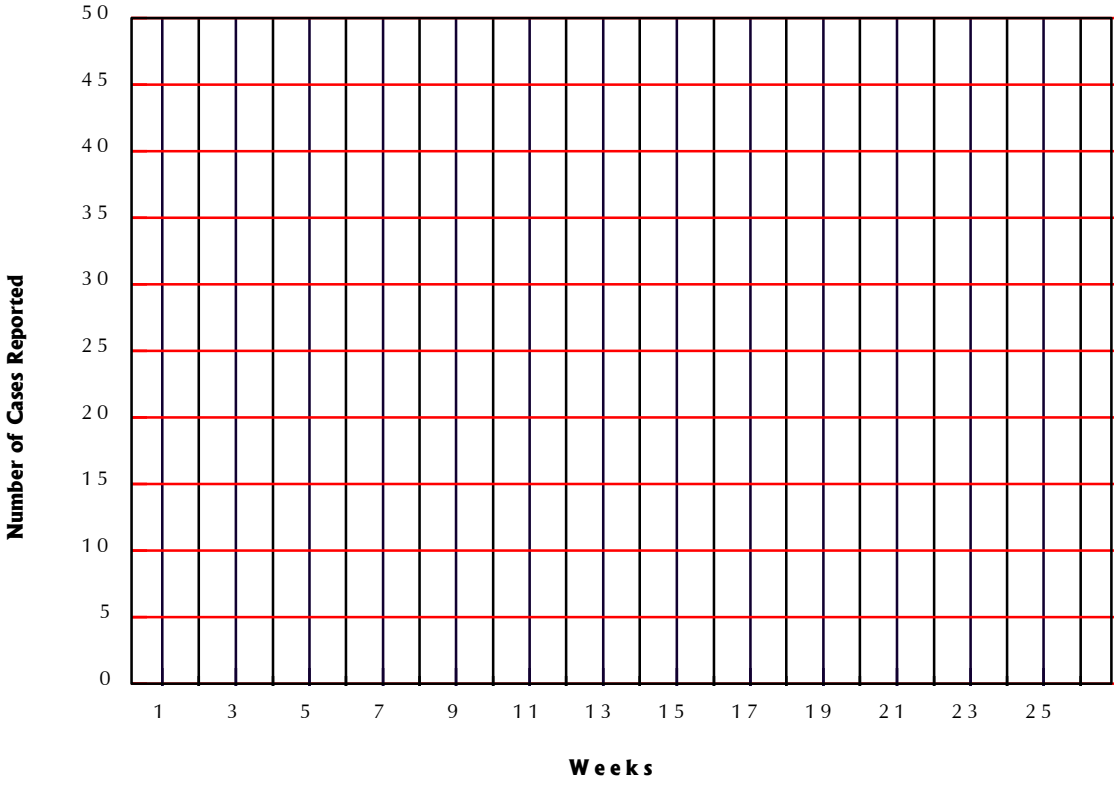
# EXERCISE 4

## DETERMINE OWN THRESHOLD NUMBER

## AND MAKE A GRAPH FOR FOLLOWING WEEKLY MENINGITIS CASES

**Weekly Meningitis Cases**

**Population** _____



# EXERCISE 5

## HEALTH EDUCATION

Use this space to write notes on the group discussion of Health Education Messages.

# EXERCISE 6

## CASE MANAGEMENT

1. What is the best antibiotic to use for treatment of suspected meningococcal disease, once an epidemic has been declared?

2. Calculate the dose of antibiotic needed for each of these patients. Consult Annex 4 of the *Guidelines* as you do this Exercise. Fill in the table on the following pages the description of each patient, as in the example.

   To give you practice in calculating dosages, there is space for 3 choices of antibiotics for each of the patients (of course, you would use only one antibiotic for a real patient in a real epidemic).

   - √ the first choice is always Tifomycin[1]
   - √ calculate the dosage the antibiotic listed in the second line
   - √ in the third line, calculate the dose of an antibiotic that would be available in your area

[1] Use of tradenames and commercial sources does not constitute endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

***EXAMPLE:*** ***18 MONTH OLD, 10 KG***

| ***Name of Antibiotic*** | ***Route*** | ***Dose*** | ***Frequency*** | ***Duration*** |
|---|---|---|---|---|
| *Tifomycin* | *IM* | *1 g*<br><br>*(4 ml)* | *1 dose* | *A single dose, a second dose if not improved in 24-48 hours* |
| *Amoxicillin* | *oral* | *2.5 g* | *every 6 hours* | *at least 4 days* |

Patient A 12 month old, 8 kg

| ***Name of Antibiotic*** | ***Route*** | ***Dose*** | ***Frequency*** | ***Duration*** |
|---|---|---|---|---|
| Tifomycin | IM | | | |
| Ampicillin | IV | | | |
| | | | | |

Patient B 22 year old, 70 kg

| *Name of Antibiotic* | *Route* | *Dose* | *Frequency* | *Duration* |
|---|---|---|---|---|
| Tifomycin | IM | | | |
| Penicillin G | IV | | | |
| | | | | |

Patient C 3 ½ years old, 14 kg

| *Name of Antibiotic* | *Route* | *Dose* | *Frequency* | *Duration* |
|---|---|---|---|---|
| Tifomycin | IM | | | |
| Chloramphenicol | IV | | | |
| | | | | |

# SELF STUDY PROJECTS

## COMPONENT 1
## ENSURE THAT THE SURVEILLANCE SYSTEM CAN DETECT MENINGOCOCCAL DISEASE

(See Chapter 3 of the *Technical Guidelines on the Detection and Control of Meningococcal Disease)*

Project Objectives: To review case definitions,
To describe the flow of surveillance information, and
To list information that should be reported.

Project: Answer these questions

1. Turn back to the case-definition exercise on page 1. Read about the patients again.

   What information should the health facility keep on each of these cases? What additional information about the patients should be recorded in the patient register?

2. Check a clinic register and see if there is room to record the information you listed in your answer to Question #1. If there is not enough room, write how you will instruct health workers to record the information:

3. Do health facilities in the district report the number of cases of meningitis to the district level each week?

   If the answer is YES, continue with these questions:

   a. Does every health facility send in a report *every week*?

      *This is important since the key to detecting epidemics of meningococcal disease is monitoring the weekly attack rates.*

   b. Are reports received *on time*? How soon after the week is over, are the reports due at the district?

      *This is important, to be able to detect an epidemic promptly.*

c. Is the attack rate (or the threshold number) monitored every week?

If the answer is NO, think of ways to improve reporting. Write your ideas here.

4. During an epidemic, how often should health facilities send reports to the district level?

5. During an epidemic, how often should the district send a report to the next highest level?

6. What information should be in the report?

Follow-up Projects:

1. Ensure that health workers can recognize cases of meningococcal disease. Review the clinical presentation and the suspect case-definition with health facility workers in your district.

2. Make a graph to record whether or not health facilities in the district are sending weekly reports on time. Provide feedback to the health facilities to encourage them. Let them know why the information is needed, and why it is important to send it in on time.

***EXAMPLE:***

*In Kent District, health facilities are expected to send a standard disease reporting form each week - meningitis is included in the diseases listed on the form. This is an example of a graph that was used in Kent District. District Staff marked the graph as each report was received and noted if the report was received late. They posted the graph where visiting health workers could see it. Soon, more reports were received on time as a friendly competition developed between the health facilities.*

WEEKLY REPORTS RECEIVED FOR JANUARY - FEBRUARY 1996

| Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Health Facility | | | | | | | | | |
| District Hospital | 1 week late | | | 3 days late | | | | | |
| Clinic A | | | | | | | | | |
| Clinic B | 2 weeks late | late | | | | | | | |
| Clinic C | | | | | | | | | |
| Health Post A | | | | | | | | | |
| Health Post B | 1 month late | 2 weeks late | 2 weeks late | 1 week late | 2 weeks late | 2 weeks late | | | |
| Health Post C | | | late | late | | | | | |

## COMPONENT 2

## ENSURE THE CAPABILITY TO GET LABORATORY CONFIRMATION

(See Section 3.6 of the *Guidelines*)

Project Objectives: To review information on laboratory confirmation.

Projects:

1. The investigation team is responsible for arranging for laboratory confirmation of meningococcal disease.

   Draw up a list of individuals who could be part of your district's meningococcal disease investigation team.

| | NAME | ALTERNATE |
|---|---|---|
| Clinician and/or | | |
| Epidemiologist | | |
| Person trained in collection of meningococcal disease specimens | | |

2. Explain why it is important to obtain laboratory confirmation of meningococcal disease.

3. What kinds of specimens are needed? When and from whom should they be obtained?

4. How should specimens be collected? What materials are needed?

5. What precautions should health workers and laboratory workers observe while collecting and handling specimens?

6. How should the specimens be packed for transport? What materials are needed?

7. What is the closest laboratory that can evaluate the specimens?

8. What means of transportation is available to bring the specimens to the laboratory? How long will it take for specimens to arrive?

# COMPONENT 3

## IDENTIFY AND ADDRESS TRAINING NEEDS

(See Section 5.3 of the *Guidelines*)

**Project Objectives:** To draft a district training plan

To plan brief training sessions

**Project:** Make a training plan. Read Section 5.3 of the *Guidelines* and decide which health workers in the district need to be trained. In the table on the next page, record the type of training needed by different types of health workers. In addition, consider how to best use non-health staff to do certain tasks during an epidemic - for example, nursing students, school teachers or community volunteers. They will also need to be trained.

| TITLE | KNOWLEDGE AND SKILLS NEEDED | NUMBER TO BE TRAINED | TIME | PERSON RESPONSIBLE | TRAINING MATERIALS |
|---|---|---|---|---|---|
| Example: Nurses at Rural Health Posts | Surveillance for meningococcal disease, reporting procedures | 40 | 1 hour | Matron Malta | Copies of case-definitions, report forms |
| Example: Nursing Assistants at Temporary Treatment Centers | Dosing and administration of Tifomycin; disposal of used needles | 15 | 2 hours | Nurse Ptori | Tifomycin chart, Tifomycin, needles and syringes, container for used needles |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Project: Plan brief training sessions

Re-read Section 5.3 in the *Guidelines* and consult your training plan. Use the *Technical Guidelines on Detection and Control of Epidemic Meningococcal Disease* and the *Exercise Book* you used in the workshop as sources of information for your lessons.

Each lesson plan should include the following:

√ **Topic** of the lesson.

For example, *How to recognize meningitis.*

√ **Objectives** for the lesson.

These are statements that explain exactly what you want the trainees to learn or to be able to do after the lesson. For example, "*Health post nurses will be able to describe the clinical presentation of meningitis and the suspect case-definition for meningitis."*

√ **Methods** you will use to teach the lesson.

Usually, in each lesson, trainees will learn some new information or practice a new skill. Think of the best way to teach them.

To give trainees new *information*, you may tell them about it, or give them something to read. To review information that trainees have learned before, or to up-date them on a topic, ask questions or lead a discussion. Then have them apply the information.

To teach or review a *skill,* explain and demonstrate each step in the skill. Then have trainees practice for themselves until they can do it properly. They should practice with the same materials or equipment that they will use in their health facilities.

- √ **Materials** that will be used.

  For example, materials for a lesson on surveillance and reporting might include: *Weekly reporting forms, clinic register, pens and paper, calculator, graph paper (or ruler), list of case definitions*.

- √ **Preparations** that need to be done before the lesson.

- √ **Description** of what you will do to teach the lesson.

There is an example of a lesson plan on the next page:

## LESSON PLAN

### USE OF TIFOMYCIN FOR NURSING ASSISTANTS WORKING IN TEMPORARY TREATMENT CENTERS

Objectives: After the lesson, nursing assistants will be able to:

- ⇨ Use the Tifomycin Dosage Chart to select the correct dose of Tifomycin
- ⇨ Demonstrate how to dispose of used needles safely

Methods: Explanation of how to use the dosage chart

Practice in use of chart

Explanation of how to dispose of needles

Demonstration of how to handle and dispose of needles

Practice in disposing of needles

Materials: Tifomycin Dose chart, Workshop Exercise Book, needles, syringes, vials of Tifomycin, needle container

Preparations:

___ Make a large copy of the Tifomycin Dose Chart

___ Review Case Management Exercise (#5) from the Exercise Book from the Workshop on Detection and Control of Meningococcal Disease

___ Get needles, syringes

___ Get vials of Tifomycin

___ Get examples of suitable containers that can be used for disposing needles

Description of Lesson:

1. Introduce the lesson. Explain why the topic is important, and what trainees will learn.

2. Show trainees the dosage chart. Explain how to use it. Be sure they understand the difference between selecting the dose by age and by weight.

3. Give trainees practice in selecting doses from the chart. As examples, have them select the doses that would be needed for adults and children of different ages and weights (use the examples from Exercise 5 in the Exercise Book and others).

4. Show them the vials of Tifomycin. Show the number of mgs and ml in each vial. Remind them that it is thick, and it may be slow to fill syringes, and slow to inject.

5. Ask trainees questions in order to review their knowledge on proper disposal of needles.

   - What diseases can be transmitted by needles that have been contaminated with blood?
   - Why do we use a new needle and a new syringe for each patient?
   - What is the proper way to dispose of used needles?
   - What is the danger of re-capping a needle?
   - What kinds of containers can be used for needle disposal?
   - What is the procedure for disposing of containers of needles after a vaccination session?

   Praise them for accurate answers and correct any errors or confusion.

6. Using a needle, syringe, and container, demonstrate how to properly dispose of a used needle. Show them examples of suitable containers that are locally available.

7. Have each trainee practice handling the syringe and needle and disposing of the needle.

8. Review and summarize the lesson. Answer any questions.

Follow-up Projects:

Train health workers according to the plans you made.

# COMPONENT 4

# MAINTAIN A RESERVE STOCK OF ESSENTIAL EQUIPMENT AND SUPPLIES

(See Section 5.4 of the *Guidelines*)

**Project Objective:** To do an inventory of treatment supplies needed during an epidemic of meningococcal disease.

**Project:** The workshop facilitators explained the Ministry of Health's policy on what supplies should be stocked in advance of a meningococcal disease epidemic, and where they are held.

When an epidemic of meningococcal disease is confirmed, health facilities will be asked to submit an inventory of the treatment supplies that they have on hand. For this project, do an inventory of treatment supplies that are on hand now. Review the antibiotics used for the treatment of meningococcal disease (See Annex 4 in the *Guidelines)*. Note which ones are commonly available in your area, and write their names in the table on the next page. Fill in the items and the amounts on hand for the district stores, and the amounts on hand at three health facilities in the district.

| Item | Amount | | | |
|---|---|---|---|---|
| | District Store | Facility 1 | Facility 2 | Facility 3 |
| Tifomycin | | | | |
| | | | | |
| | | | | |
| | | | | |
| Paracetamol | | | | |
| Anticonvulsant | | | | |
| Antiemetic | | | | |
| IV Fluids | | | | |
| Adult Giving Sets | | | | |
| Child/Infant Giving Sets | | | | |
| ORS sachets | | | | |
| | | | | |
| | | | | |

# COMPONENT 5
# ORGANIZE AN EPIDEMIC COMMITTEE (DISTRICT LEVEL )

(See Section 5.5 of the *Technical Guidelines*)

Project Objective: To identify the responsibilities and make-up of the epidemic committee.

Project: Suppose that the district next to yours informs you that there is a possible epidemic of meningococcal disease in their area. You wish to make preparations for controlling the spread of the disease, and for providing proper treatment in case your district is affected.

The first step is to convene a committee to plan and implement activities in your district.

1. What will the responsibilities of the committee be?

2. Who should be part of this committee? Identify specific individuals and their positions.

Follow-up Projects:

3. Contact each individual listed to get his/her agreement to be part of a meningococcal disease committee.

4. Convene a meeting, and bring members up to date on meningococcal disease surveillance and control. Review the duties of each member and discuss how they would carry them out. Try to identify any problems and obstacles, and make a plan to overcome them.

5. At that meeting, or at another meeting, ask the group to review the evaluation of the district's state of preparedness (see Component 10) and to work on making improvements.

   If the evaluation has not been done, plan to do it.

## COMPONENT 6

## PLAN LOGISTICS AND STAFF NEEDED FOR CONTROL MEASURES (VACCINATION )

(See Section 4.4 of the *Guidelines*)

Project Objective: To select possible locations for vaccination sites and plan how the sessions would be conducted.

Project: Visit possible vaccination sites that might be used in the event of an epidemic. Plan how to organize a vaccination session at one of those sites (not a health facility). Make a drawing to show how you would organize the vaccination site. If possible, do this Project at the same time as Project 8.

Include the following areas (each of which will need to be staffed):

- √ waiting area (and health education);
- √ vaccine cards;
- √ vaccination administration;
- √ syringe loading;
- √ card stamping and tallying of doses given; and
- √ storage.

Follow-up Project: Go to one location and practice setting up a temporary vaccination site. Conduct a "mock" vaccination session to identify any problems.

# COMPONENT 7

# ENSURE ADEQUATE FINANCES

Project Objective: To identify possible funding sources, and to seek support.

Project: Planning and response activities have a cost. You should determine how much these activities will cost, and see whether they are covered in the district budget. If they are not, you should ask for funding, from the district or from another source. You are more likely to get cooperation and funds if you present a plan and written estimate of costs. If more funding is not available, think of ways to use the resources you already have (e.g., re-assign personnel).

1. Use the table on the next page to list activities you need to do to improve the district's preparedness level. In the second column, list the supplies and resources (e.g., personnel, technical support, money, equipment, etc.) needed. In the 3rd column, list sources of support for the resources (include possible ones).

   If possible, do this Project in conjunction with Project 10.

| ACTIVITY | RESOURCES NEEDED | SOURCE OF SUPPORT |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

2. After completing the table, draft a letter to one source asking for support. The letter should contain the following:

   a. a paragraph introducing yourself and your qualifications to write;

   b. the reason for your request;

   c. data which supports your request;

   d. what you want;

   e. an indication of when you would need it (for reserve against future epidemics or immediately to respond).

   Keep the letter brief (one page of text, and several pages of data).

# COMPONENT 8
# ORGANIZE VACCINATION TEAMS

(See Sections 4.4 and 5.6 of the *Guidelines*)

Project Objectives: To identify members of vaccination teams.

To plan mass vaccination campaign in rural and in urban areas.

Projects:

1. The table below lists members recommended to be part of vaccination teams. For each member, identify at least two individuals in your district who could be contacted when you are organizing vaccination teams. (You may want to add one person for each vaccinator who could load syringes).

| TEAM MEMBER | TEAM 1 | TEAM 2 |
|---|---|---|
| 1. Supervisor | | |
| 2. Vaccinator 1 | | |
| 3. Vaccinator 2 | | |
| 4. Record Clerk 1 | | |
| 5. Record Clerk 2 | | |
| 6. Cold Chain Technician | | |
| 7. Community Representative | | |
| 8. Driver | | |

2. Pick two real places in your district - one remote village and one town - and imagine that there is an epidemic of meningococcal disease in both of them.

   Plan how to conduct vaccination in each place. Assume you will vaccinate everyone age 3 months to 30 years of age. Assume a vaccination team can administer 1,000 doses of vaccine a day. Answering the questions below will help you plan how to organize a rapid mass vaccination campaign. Estimate the amount of supplies needed on a daily basis.

## Overall Planning for Vaccination Campaign

a. Should you vaccinate the town and the village at the same time, or one after the other? If one after the other, explain how you would pick the one to do first.

b. How many vaccination teams will be needed? Who will be on the teams?

c. When will they be trained?

d. Who will train them?

e. How is vaccine requested?

Planning the Vaccination Campaign in the Remote Village:

a. What is the population of the village? _____

b. How many people are there under the age of 30? _____

c. How many doses of vaccine and syringes and needles are needed? _____

d. How many vaccine carriers are needed? _____

e. How long will it take to travel to the village? _____

f. How many people from your headquarters will travel there? _____

g. How many vehicles are needed? _____

h. What is the best way to communicate with the village leaders?

How can you communicate with health workers there, or nearby?

How can someone at your headquarters communicate with the vaccination team?

i. What messages will you send to the leaders and the health workers before you arrive? What should they prepare?

j. How long will it take to vaccinate everyone under the age of 30 years?

k. Are public education messages available in the language spoken there?

What are the best ways to communicate with the people of the village?

l. Will you attempt to collect specimens while there? If so, what materials will you need, and how will you arrange prompt transport of the specimens?

## Planning the Vaccination Campaign in the Town

a. What is the population of the town? _____

b. How many people are there under the age of 30? _____

c. How many doses of vaccine and syringes and needles are needed? _____

d. How many vaccine carriers are needed? _____

e. How long will it take to travel to the town?_____

f. How many people from your headquarters will travel there? _____

g. How many vehicles are needed? _____

h. What is the best way to communicate with the town's leaders? _____

How will you communicate with the local health workers?

i. What information do you want the towns people and the local health workers to have before you begin the campaign?

j. How long will it take to vaccinate everyone under the age of 30 years?

k. Are public education messages available in the language(s) spoken there?

What are the best ways to communicate with the people?

l. Will you attempt to collect specimens while there? What materials will you need?

Add other items you think of in the blank lines.

| Supplies/Personnel | Amount Village | Amount Town | Source of Supplies |
|---|---|---|---|
| Vehicles | | | |
| Fuel | | | |
| Vaccine doses | | | |
| Needles | | | |
| Syringes | | | |
| Vaccine carriers | | | |
| Cold packs/ice | | | |
| Disinfectant | | | |
| Containers for used needles | | | |
| Vaccinators | | | |
| Drivers | | | |
| Other staff | | | |
| | | | |
| Allowance for staff | | | |
| Health education materials | | | |
| Vaccine cards | | | |
| Immunization tally sheets | | | |
| | | | |
| | | | |
| | | | |
| | | | |

# COMPONENT 9

# MAKE AN EMERGENCY RESPONSE PLAN

(See Section 5.9 of the *Guidelines*)

Project Objective: To think through activities that need to be done during an emergency response.

Project: Planning Matrix for Emergency Response

Imagine that a meningococcal disease epidemic is about to begin. Completing the following matrix will help you think through activities that need to be undertaken during an epidemic. For each activity, identify a person responsible, an alternate, time frame, materials/resources needed and their possible sources, and monetary costs to the district.

Write other activities that you think of in the blank rows.

| Activity | Person Responsible/ Alternate | Time Frame | Materials/ Resources Needed | Source | Cost |
|---|---|---|---|---|---|
| 1. report the suspected epidemic | | | | | |
| 2. conduct field investigation | | | | | |
| 3. convene epidemic committee | | | | | |
| 4. identify staff responsibilities | | | | | |
| 5. inventory & order essential vaccination and treatment supplies | | | | | |
| 6. inform health facilities to be alert for cases | | | | | |
| 7. inform neighboring districts | | | | | |
| 8. collect and report data | | | | | |
| 9. conduct training | | | | | |
| 10. conduct rapid mass vaccination | | | | | |
| 11. educate the public | | | | | |
| 12. monitor, document, and evaluate control measures | | | | | |

| Activity | Person Responsible/ Alternate | Time Frame | Materials/ Resources Needed | Source | Cost |
|---|---|---|---|---|---|
| | | | | | |
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# COMPONENT 10

# EVALUATE EPIDEMIC PREPAREDNESS

(See Chapter 5.0 of the *Guidelines on the Detection and Control of Meningococcal Disease*)

Project Objective: To assess the district's epidemic preparedness

Project: Evaluate District Epidemic Preparedness

Chapter 5.0 of the *Technical Guidelines on the Detection and Control of Meningococcal Disease* discusses the components of preparedness. Re-read the information in that chapter, and answer the questions about preparedness, which are in the boxes. When you can answer "yes" to all the questions, your district is ready to respond to an epidemic of meningococcal disease.

You will find these questions repeated in the table on the next page. For each component, the table gives a reference to the section in the *Guidelines* where there is information on the component.

Use the columns at the right of the table to record what the district has accomplished. In the "comment" column, write the date that each item was evaluated and any comments.

For this Project, review each of the questions and decide whether or not your district is ready. There are blank rows for you to add other items you think of. This is a good Project to do with a group of co-workers, ideally with members of the Epidemic Control Committee.

| DISTRICT PREPAREDNESS CHECKLIST | | | |
|---|---|---|---|
| | Yes | No | Comment |
| Ensure That The Surveillance System Can Detect Meningococcal Disease | | | |
| Routine Reporting and Emergency Notification | | | |
| Can health workers recognize cases of meningitis? | | | |
| Do health workers know the surveillance case-definitions for meningitis? | | | |
| Do health workers know how to report suspected cases by reliable means? | | | |
| Do health workers know what to report? | | | |
| Are routine reports complete, sent regularly, and on time? | | | |
| Are weekly meningococcal disease rates being monitored? | | | |
| Has the threshold number of cases been determined? (optional) | | | |
| Investigation Team | | | |
| Have members of an Investigation Team been identified? | | | |
| Have members have been trained or briefed on their duties? | | | |
| Has funding for an investigation been provided for? | | | |
| Have supplies and resources been provided for? | | | |

| | | | |
|---|---|---|---|
| Ensure The Capability To Get Laboratory Confirmation | | | |
| Have laboratories been identified for examination for CSF? | | | |
| Has a reference laboratory been identified for culture, for identification of N. meningitidis and for classification by serogroup? | | | |
| Are supplies needed for collection and transport of specimens available? | | | |
| Have funds for laboratory costs have been allocated? | | | |
| Training | | | |
| What percentage of the district's health workers are up-to-date on meningococcal disease? | _____ % | | |
| Have the responsibilities of health staff been determined? | | | |
| Is there a plan to train health workers in advance of an epidemic? | | | |
| Is there a plan to quickly train health workers at the time of an epidemic? | | | |
| Are health workers being trained according to the plan(s)? | | | |
| Maintain a Reserve Stock of Equipment and Supplies | | | |
| Is there a reserve stock of vaccine?<br>If there is a reserve stock, where is it located?<br>How many doses are there? | | | |
| Has funding been found for the reserve supplies? | | | |

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| Do district officials know how to request vaccine? | | | |
| Is there a stock of materials needed for laboratory confirmation? | | | |
| Has funding been found for the reserve supplies? | | | |
| Organize An Epidemic Committee | | | |
| Is there a meningococcal disease epidemic committee (or a meningococcal disease subcommittee of another committee)? | | | |
| If so, do the members meet regularly? | | | |
| If so, are members working to prepare the district for a possible epidemic? | | | |
| Plan Staff And Logistics Needed For Control Measures | | | |
| Have responsibilities for health facility and district personnel been decided upon? | | | |
| Is there a plan for re-assigning staff during an epidemic? | | | |
| Is there a plan to recruit additional persons (such as nursing students) to help with vaccination campaigns? | | | |
| Is there a plan to train non-health personnel to help in mass vaccination campaigns? | | | |
| Has funding been identified for extra staff costs during an epidemic? | | | |
| Have logistics needs during an epidemic been identified? | | | |
| Have potential sites for vaccination been identified? | | | |

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| Has funding for extra costs related to logistics been identified? | | | |

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| Financial Support For Preparation And Response | | | |
| Have costs related to preparation for an epidemic been identified? | | | |
| Have costs related to investigation of a suspected epidemic been identified? | | | |
| Have costs related to the response an epidemic been identified? | | | |
| Has a source of funding or support has been found for each expense? | | | |
| Organize Vaccination Teams | | | |
| Have potential members of vaccination teams been identified? | | | |
| If so, have they been trained? | | | |
| Has a source of supplies (other than vaccine itself) been identified? | | | |
| Is the cold-chain prepared? | | | |
| Has transport been identified? | | | |
| Have possible vaccination sites been identified? | | | |
| Has funding for mass vaccination (other than for vaccine itself) been identified? | | | |
| Make An Emergency Response Plan | | | |
| Is there a written Emergency Response Plan for responding to an epidemic meningococcal disease? | | | |

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| Are members of the meningococcal disease epidemic committee, and other persons, who are involved, aware of the plan? | | | |

| Evaluate Epidemic Preparedness | | | |
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| Has the preparedness of district been evaluated? | | | |
| If so, have recommendations of the evaluation been acted on? | | | |
| Are regular, periodic evaluations scheduled? | | | |

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